

WHAT IS CLAIMED IS:

1. A pilot air system for a combustor of a gas turbine, the system comprising:

a pilot air compressor having inlet connectable to in to a main passageway, wherein said main passageway receives compressed air from a compressor for the gas turbine;

a pilot air platform positioned adjacent to the combustor of the gas turbine, wherein said pilot air compressor is positioned on said platform;

an inline throttling valve coupled to the first main passageway;

a by-pass passageway for the pilot air, proximate to the platform, and arranged in parallel to the main passageway and compressor, wherein said by-pass passageway receives pilot air from the main passageway downstream of the pilot air compressor and passes a portion of the compressed pilot air to the main passageway upstream of the pilot air compressor;

a by-pass throttling valve inline with said by-pass passageway to meter pilot air flowing through said by-pass passageway, and

said main passageway having an outlet connectable to said combustor.

2. A pilot air system as in claim 1 further comprising a heat exchanger in series with said main

passageway downstream of the inlet and upstream of the pilot air compressor, wherein said heat exchanger is positioned below the platform.

3. A pilot air system as in claim 2 wherein said heat exchanger is an adjustable heat exchanger and further comprises a variable speed fan and a radiator in series with said main passageway.

4. A pilot air system as in claim 2 wherein said heat exchanger is remote from the platform.

5. A pilot air system as in claim 1 wherein said platform is supported by at least one pedestal.

6. A pilot air system as in claim 1 wherein said platform extends through a housing enclosing the gas turbine.

7. A pilot air system as in claim 1 wherein said inline throttling valve is a first and second throttling valve in a common valve housing.

8. A pilot air system as in claim 1 wherein said outlet is connectable to a pilot air manifold of said combustor.

9. A pilot air system as in claim 1 wherein said throttling valves adjust an increases in pilot air pressure such that a pressure of the pilot air at the outlet is in a range of 1.00 to 1.50 of the pilot air pressure at the inlet.

10. A pilot air system as in claim 1 wherein said throttling valves adjust an increases in pilot air pressure such that a pressure of the pilot air at the outlet is in a range of 1.05 to 1.25 of the pilot air pressure at the inlet.

11. A pilot air skid for providing pilot air to a combustor of a gas turbine wherein the skid comprises:

a platform positioned proximate to the gas turbine;

a pilot air compressor positioned on the platform;

a pilot air main passageway having an inlet adapted to receive compressed air discharged by a compressor of the gas turbine and having an outlet coupled to an inlet to the pilot air compressor;

a first throttling valve in said main passageway;

a by-pass passageway having an inlet joined to said main passageway downstream of the pilot air compressor and an outlet joined to said main passageway upstream of the pilot air compressor;

a by-pass throttling valve coupled to said by-pass passageway, and

an outlet of the pilot air main passageway connectable to the combustor of the gas turbine.

12. A pilot air system as in claim 11 wherein said main passageway further comprises inlet and outlet

connections to a heat exchanger for cooling pilot air in the main passageway.

13. A pilot air system as in claim 12 wherein said heat exchanger further is an adjustable heat exchanger and further comprises a variable speed fan and a radiator inline with said main passageway.

14. A pilot air system as in claim 11 wherein said heat exchanger is remote from the platform.

15. A pilot air system as in claim 11 wherein said platform is supported by at least one pedestal.

16. A pilot air system as in claim 11 wherein said platform extends through a housing enclosing the gas turbine.

17. A pilot air system as in claim 1 wherein said inline throttling valve is a first and second throttling valve in a common valve housing.

18. A pilot air system as in claim 1 wherein said outlet is connectable to a pilot air manifold of said combustor.

19. A pilot air system as in claim 11 wherein said throttling valves adjust an increases in pilot air pressure such that a pressure of the pilot air at the outlet is in a range of 1.00 to 1.50 of the pilot air pressure at the inlet.

20. A pilot air system as in claim 11 wherein said throttling valves adjust an increases in pilot air pressure such that a pressure of the pilot air at the outlet is in a range of 1.05 to 1.25 of the pilot air pressure at the inlet.